

ABSTRACT OF THE DISCLOSURE

An improved air conditioner system for controlling a desired temperature and a reduced humidity level in a space to be environmentally controlled, that comprises an additional second heat exchanger in the separate indoor air flow path. The refrigerant circuit includes an anti-migration control device between the compressor and the second heat exchanger. An anti-floodback control device is located upstream of the compressor between the first heat exchanger in the indoor air path and the compressor. An expansion control device is also located in the refrigerant circuit between the heat exchanger in the outdoor air flow path and the heat exchanger in the indoor air flow path. The second heat exchanger effectively becomes a hot gas re-heat de-superheater heat exchanger. The system enhances the latent capacity for providing dehumidified air of from 25-40 percent.